Details of the studies reviewed and a summary of the data extracted

Study	Country of origin	Responding population (of total population studied)	Study design	Tool being investigated	BEME quality grading	Outcome, including modified Kirkpatrick level of evaluation
Brinkman et al 2007[17]	USA	36 first year paediatric residents	Randomised controlled trial	MSF	Higher	Improvement in communication skills and professional behaviours—level 3
Burford et al 2010[18]	UK	249 foundation year 1 trainees (plus 161 supervisors and 829 raters)	Descriptive survey (questionnaire)	MSF: comparison of two formats	Higher	Self reported changes in attitudes—level 2a. MSF not felt to be very useful
Lockyer et al 2003[19]	Canada	144 (of 200) surgeons	Descriptive survey (questionnaire)	MSF	Lower	Self reported modifications of attitudes ("Will this feedback lead to you implementing change?")—level 2a. Most did not want to change
Murphy et al 2009[20]	UK	51 (of 171) GP registrars	Observational study including survey	MSF	Higher	Educational impact scored by participants on 7-point Likert scale—level 1. Mean score 4.2
Sargeant et al 2003[21]	Canada	113 (of 142) family physicians	Pilot descriptive survey (questionnaire)	MSF	Higher	Self reported changes in behaviour in 61% after MSF—level 3. Changes in attitude in 89% as a result of feedback—level 2a
Sargeant et al 2005[22]	Canada	15 family physicians	Descriptive qualitative study (focus groups)	MSF	Higher	A few self reported changes in behaviour after MSF—level 3. Negative feedback less likely to lead to change. Also lots of level 1 reaction

Study	Country of origin	Responding population (of total population studied)	Study design	Tool being investigated	BEME quality grading	Outcome, including modified Kirkpatrick level of evaluation
Violato et al 2003[23]	Canada	144 (of 200) surgeons	Observational study including survey	MSF	Lower	Data not displayed—possibly level 2a or 3. Same data leading to different results? (see Lockyer et al 2003[19])
Violato et al 2008[24]	Canada	250 family physicians	Prospective longitudinal observational study	MSF	Higher	MSF ratings collected at two points, 5 years apart—level 3. Improvement in all scores at second time point, but not clear if this is solely due to MSF
Malhotra et al 2008[25]	Canada	12 internal medicine residents	Descriptive qualitative study (focus groups and interviews)	Mini-CEX	Higher	An attempt to qualitatively assess residents' perceptions of mini-CEX as a formative tool—level 1. Most felt there was a positive educational impact
Nair et al 2008[26]	Australia	16 (of 28) international medical graduates	Observational study including survey	Mini-CEX	Higher	Reactions to satisfaction with mini-CEX as a learning tool—level 1. Nearly half satisfied or very satisfied
Weller et al 2009[27]	New Zealand	30 (of 35) trainee anaesthetists (plus 42 (of 48) assessors)	Descriptive survey (questionnaire)	Mini-CEX	Higher	Reactions to frequency and quality of feedback—level 1. Most felt mini-CEX had a positive effect
Weller et al 2009[28]	New Zealand	11 trainee anaesthetists; 12 specialists	Descriptive qualitative study (focus groups and interviews)	Mini-CEX	Higher	Both trainees and assessors felt there was positive educational impact—level 1

Study	Country of origin	Responding population (of total population studied)	Study design	Tool being investigated	BEME quality grading	Outcome, including modified Kirkpatrick level of evaluation
Morris et al 2006[29]	UK	25 (of 27) preregistration house officers	Pilot observational study including survey	DOPS (no survey data for mini-CEX or MSF)	Lower	Reactions to DOPS surveyed (for example, 70% agreed with "I think DOPS help improve my clinical skills")—level 2b
Pereira et al 2009[30]	UK	539 surgeons at different levels of training	Descriptive survey (questionnaire)	ISCP portfolio contents (mini-CEX, CbD, DOPS, MSF)	Lower	Reactions to impact of portfolio on training opportunities and training in general—level 1. Neutral or negative responses predominate
Ryland et al 2006[31]	UK	95 (of 147) foundation year 2 doctors	Descriptive survey (questionnaire)	Foundation portfolio contents (MSF, CbD, mini-CEX, DOPS)	Lower	Reactions to effectiveness of portfolio in meeting educational requirements—level 1. Most gave positive responses
Wilkinson et al 2008[32]	UK	Medical specialist registrars: 128 for mini-CEX, 59 for DOPS, 230 for MSF	Observational study including survey	Mini-CEX, DOPS, MSF	Higher	Reactions to contribution to personal development (positive)—level 1. Other positive comments about feedback and improving training

BEME=Best Evidence Medical Education. MSF=multisource feedback. Mini-CEX=mini-clinical evaluation exercise. DOPS=direct observation of procedural skills. ISCP=Intercollegiate Surgical Curriculum Programme. CbD=case based discussion.

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